

We claim:

1) A method of processing material, comprising:

- a. placing the material onto a milling line for processing;
- b. initializing a sensor positioned to sense a measurement of a predetermined characteristic of a predetermined portion of the material, the sensor protected by a sensor housing;
- c. initializing a stepper motor, disposed proximate the line, to a predetermined position;
- d. processing the material at a predetermined location along the milling line;
- e. sensing a predetermined characteristic of the material on the milling line;
- f. calculating an adjustment of the material in a predetermined plane using the sensed characteristic;
- g. sending a signal to the stepper motor based on the calculated adjustment, if the adjustment is non-zero; and
- h. retaining the sensed characteristic of the material for certification of the sensed characteristic.
- 2) The method of claim 1 wherein step (a) further comprises sensing a predetermined characteristic of the material on the milling line by physical contact of the sensor with the material to be processed.

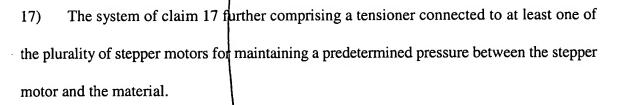
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- 3) The method of claim 1 wherein the sensed characteristic comprises a measurement of a predetermined portion of the material in a single plane.
- 4) The method of claim 1 wherein the sensed characteristic comprises a measurement of length of at least one side of the material and a diagonal of the material.
- The method of claim 1 wherein the sensed characteristic comprises a measurement of length of a plurality of sides of the material and a calculated diagonal of the material.
- 6) The method of claim 1 further comprising generating a certification of the predetermined characteristic based on the retaining sensed characteristic.
- 7) The method of claim 6 wherein the certification comprises a report indicative of calculated "real-time" statistical process control charts, listings of dimensions as processed, and capability process charts.
- 8) The method of claim 6 wherein the certification is generated in real-time.
- 9) The method of claim 1 wherein the material is at least one of metal, plastic, glass, paper, organic materials, and composites.

- 10) The method of claim 1 wherein the processing is at least one of cutting, shaping, etching, assembling, welding, progressive dies, stamping, and riveting.
- 11) A device for processing material, adaptable for use with an existing manufacturing device, comprising:
 - a. a milling line, comprising:
 - i. a table on which material may be placed for processing; and
 - ii. a materials processor;
 - b. at least one stepper motor disposed proximate the milling line, the stepper motor useful to control a directional movement of material placed onto the milling line for milling, the stepper motor operatively in contact with the material to affect positioning of the material on the table;
 - c. a mainframe disposed proximate the existing manufacturing device;
 - d. a positioner disposed proximate a first end of the mainframe;
 - e. a protected sensor for sensing a predetermined characteristic of the material, the sensor disposed proximate the mainframe and the materials to be processed;
 - f. a controller for issuing stepper motor commands;
 - g. a measurement sensor disposed proximate the mainframe, the sensor capable of measuring a predetermined dimension of the material in real-time; and

- h. a computer operatively in communication with the controller and the sensors, the computer programmed to:
 - i. receive signals from the measurement sensor;
 - ii. receive the measured predetermined dimensions of the material in realtime from the controller;
 - iii. issue control directives to the controller for use in controlling the stepper motor; and
 - iv. concurrently generate a certification of the measured predetermined dimensions.
- 12) The system of claim 11 further comprising a plurality of stepper motors.
- 13) The system of claim 11 further comprising a tensioner connected to the stepper motor for maintaining a predetermined pressure between the stepper motor and the material.
- 14) The system of claim 11 wherein the measurement sensor is at least partially in physical contact with the material to be processed.
- 15) The system of claim 11 wherein the measurement sensor comprises pressure sensors, acoustic sensors, and optical sensors.

- 16) A device for processing a material, comprising:
 - a. a milling table for movably accepting material to be processed;
 - b. a plurality of stepper motors operatively connected to the milling table, at least one first stepper motor being capable of moving the material in a first plane;
 - c. a materials processor;
 - d. a measurement sensor situated within a sensor housing;
 - e. a controller operatively connected to the measurement sensor and the plurality of stepper motors; and
 - f. a computer operatively in communication with the controller;
 - g. wherein
 - i. the computer calculates an adjustment of the material on the milling table using a sensed measurement;
 - ii. the computer provides the controller with data useful in controlling at least one of the stepper motors based on the calculated adjustment; and
 - iii. the computer concurrently generates a certification of the sensed measurements.



- 18) The system of claim 17 wherein the measurement sensor is at least partially in physical contact with the material to be processed.
- 19) The system of claim 17 wherein the measurement sensor comprises pressure sensors, acoustic sensors, and optical sensors.